ABSTRACT

In a semiconductor physical quantity sensor of electrostatic capacitance type, mutually facing peripheral areas (bonding areas) of a glass substrate and a silicon substrate are contacted for anodic bonding, while at the same time, both substrates have an anodic bonding voltage applied therebetween so as to be integrated. A fixed electrode is formed on a bonding face-side surface of the silicon substrate, while a movable electrode is formed on a bonding face-side surface of the semiconductor substrate. An equipotential wiring, which short-circuits the fixed electrode to the movable electrode as a countermeasure to discharge in anodic bonding, is formed on the bonding face-side surface of the glass substrate inside the bonding area before the anodic bonding. After the anodic bonding, the equipotential wiring is cut and removed. By manufacturing the sensor in this manner, the fixed electrode of the insulating substrate is made equipotential to the movable electrode of the semiconductor substrate when the insulating substrate is anodically bonded to the semiconductor substrate, thereby preventing discharge from occurring. Accordingly, it is possible to obtain a high bonding strength and desired sensor characteristics without causing bonding voids to occur and a sensor chip to increase in size.